

HG series

- High ripple current. Low impedance at High frequency range.
- 105°C Long life : 4000 hours~10000 hours.
- RoHS Compliance
- 高紋波電流.高頻低阻抗。
- 105°C 4000小時~10000小時長壽命產品。



SPECIFICATIONS

Items 項目	Characteristics 特性										
Capacitance Tolerance 靜電容量誤差	± 20%(120Hz,20°C)										
Operating Temperature Range 適用溫度範圍	-40 ~ +105°C										
Rated Voltage Range 額定電壓範圍	6.3 ~ 100VDC										
Leakage Current 洩漏電流	I ≤ 0.01CV or 3 (μA) which is greater.(After 2 minutes application of DC rated voltage, at 20 °C)										
Dissipation Factor 散逸因素(tan δ)	Measurement Frequency: 120Hz. Temperature: 20°C										
	Rated Voltage(V)	6.3	10	16	25	35	50	63	80	100	
	tan δ (Max)	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.09	0.08	
When nominal capacitance over 1000μF, tanδ shall be added 0.02 to the listed value with increase of every 1000μF.											
Low Temperature Stability 低溫特性	Measurement Frequency: 120Hz.										
	Rated Voltage(V)	6.3	10	16	25	35	50	63	80	100	
	Impedance Ratio(Max) 阻抗比率(最大值)	Z(-25°C)/Z(20°C)	4	3	2	2	2	2	2	2	2
Load Life 負荷壽命	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjected to DC voltage with the rated ripple current is applied for varied hours according to varied Φ and voltage [please refer to below sheet] at 105°C.										
	Case Size	ΦD ≤ 6.3		ΦD = 8, 10		ΦD ≥ 12.5					
	Rated Voltage(V)	6.3~10 V	4,000hours		6,000hours		8,000hours				
		16~100 V	5,000hours		7,000hours		10,000hours				
	Capacitance Change	Within ± 25% of Initial Value									
	tan δ	200% or less of Initial Specified Value									
Leakage Current	Initial Specified Value or less										
Shelf Life 放置壽命	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours 105°C without voltage applied. Before the measurement, the capacitor shall be preconditioned by applying voltage according to them 4.1 of JIS C5101-4.										
	Capacitance Change	Within ± 20% of Initial Value									
	tan δ	200% or less of Initial Specified Value									
	Leakage Current	Initial Specified Value or less									
Standards 參照標準	IEC 60384-4(JIS C5101-4)										

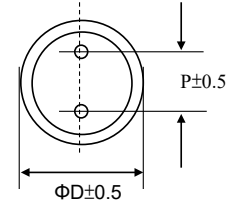
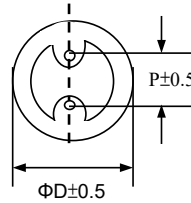
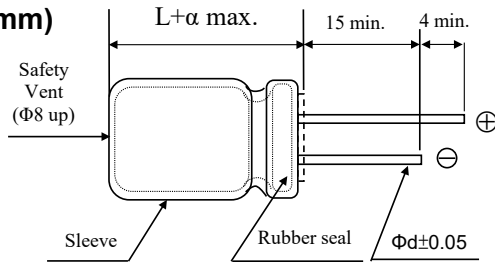
HG

Frequency Coefficient of Permissible Ripple Current

Capacitance (μF)	Frequency (Hz)				
	50	120	300	1K	100K
≤ 33	0.50	0.55	0.70	0.90	1.00
47 ~ 330	0.60	0.70	0.85	0.95	1.00
470 ~ 1000	0.65	0.75	0.90	0.98	1.00
1200 ~ 18000	0.70	0.80	0.95	1.00	1.00

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DIMENSIONS(mm)



ΦD	5	6.3	8	10	12.5	16	18
P	2.0	2.5	3.5	5.0	5.0	7.5	7.5
Φd	0.5	0.5	0.5	0.6	0.6	0.8	0.8

α	(L < 20) 1.5
	(L ≥ 20) 2.0

STANDARD RATINGS

DxL(mm), R.C : (mA rms) at 105°C 100kHz , IMP:(Ω max) at 20°C,100kHz.

Cap (μF)	V	6.3				10				
		Item	D x L	IMP		R.C.	D x L	IMP		R.C.
				20°C	-10°C			20°C	-10°C	
100						5x11	0.580	2.30	215	
150		5x11	0.570	2.30	210	5x11	0.580	2.30	230	
220		6.3x11	0.250	0.900	320	6.3x11	0.220	0.870	340	
330		6.3x11	0.210	0.870	340	6.3x11	0.220	0.870	380	
470		8X11.5	0.150	0.580	520	8X11.5	0.130	0.520	640	
680		8X11.5	0.130	0.520	645	8x15	0.086	0.350	845	
	10x12.5					0.080	0.310	865		
820		10x12.5	0.080	0.320	865	10x16	0.070	0.280	1015	
1000		8x15	0.085	0.350	870	8x20	0.068	0.270	1050	
	10x16					0.060	0.240	1215		
1200		8x20	0.071	0.260	1050	10x20	0.045	0.180	1410	
		10x16	0.060	0.240	1215					
1500		10x20	0.045	0.180	1410	10x25	0.041	0.170	1650	
1800		12.5x16	0.048	0.160	1460	12.5x16	0.049	0.160	1450	
						12.5x20	0.039	0.150	1710	
2200		10x25	0.042	0.170	1650	10x30	0.030	0.120	1920	
						12.5x20	0.035	0.120	1910	
						16x16	0.042	0.120	1940	
2700		10x30	0.030	0.120	1910	18x16	0.042	0.110	2220	
		16x16	0.041	0.120	1945					
3300		12.5x20	0.034	0.120	1900	12.5x25	0.026	0.089	2230	
3900		12.5x25	0.026	0.088	2240	12.5x30	0.023	0.078	2660	
		18x16	0.042	0.110	2210	16x20	0.026	0.078	2540	
4700		12.5x30	0.023	0.078	2650	12.5x35	0.020	0.065	2890	
5600		12.5x35	0.020	0.065	2890	12.5x40	0.016	0.055	3360	
						16x25	0.020	0.060	2940	
						18x20	0.025	0.066	2870	
6800		12.5x40	0.016	0.055	3350	16x31.5	0.016	0.050	3460	
		16x25	0.020	0.060	2940					
		18x20	0.025	0.066	2870					
8200		16x31.5	0.016	0.050	3450	16x35.5	0.015	0.044	3610	
						18x31.5	0.015	0.040	4180	
10000		16x35.5	0.014	0.044	3620	16x40	0.013	0.038	4090	
		18x25	0.018	0.049	3150	18x35.5	0.014	0.038	4230	
12000		16x40	0.012	0.038	4090	18x40	0.011	0.032	4290	
		18x31.5	0.014	0.040	4180					
15000		18x35.5	0.013	0.038	4230					
18000		18x40	0.012	0.032	4290					

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STANDARD RATINGS

DxL(mm), R.C : (mA rms) at 105°C 100kHz , IMP:(Ω max) at 20°C,100kHz.

Cap (μF)	V	16				25				
		Item	D x L	IMP		R.C.	D x L	IMP		R.C
				20°C	-10°C			20°C	-10°C	
47						5x11	0.570	2.30	210	
56		5x11	0.570	2.30	220	5x11	0.570	2.30	240	
100		6.3x11	0.210	0.820	310	6.3x11	0.210	0.870	340	
120		6.3x11	0.210	0.870	340					
220		8x11.5	0.190	0.850	510	8x11.5	0.120	0.520	650	
330		8x11.5	0.120	0.520	650	8x15	0.087	0.350	850	
						10x12.5	0.080	0.320	870	
470		8x15	0.086	0.350	840	8x20	0.069	0.270	1050	
		10x12.5	0.080	0.320	865	10x16	0.060	0.240	1210	
680		8x20	0.069	0.270	1060	10x20	0.045	0.180	1410	
		10x16	0.060	0.240	1210	12.5x16	0.049	0.160	1460	
820		10x20	0.052	0.220	1310	10x25	0.041	0.170	1660	
1,000		10x20	0.045	0.180	1410	10x30	0.030	0.120	1920	
						12.5x21	0.034	0.120	1910	
		13x16	0.050	0.160	1450					
						16x16	0.042	0.120	1940	
1,200		10x25	0.042	0.170	1650	18x16	0.043	0.110	2220	
1,500		10x30	0.030	0.120	1920	12.5x25	0.026	0.089	2240	
		12.5x21	0.035	0.120	1910					
		16x16	0.042	0.120	1940					
1,800		12.5x25	0.028	0.095	2140	12.5x30	0.024	0.078	2660	
						16x20	0.026	0.078	2540	
2,200		12.5x25	0.026	0.089	2240	12.5x35	0.020	0.065	2890	
		18x16	0.042	0.110	2220	18x20	0.025	0.066	2870	
2,700		12.5x30	0.023	0.077	2650	12.5x40	0.016	0.056	3360	
		16x20	0.026	0.078	2540	16x25	0.021	0.060	2940	
3,300		12.5x35	0.020	0.066	2890	16x31.5	0.016	0.050	3460	
						18x25	0.018	0.048	3150	
3,900		12.5x40	0.016	0.056	3350	16x35.5	0.014	0.043	3620	
		16x25	0.021	0.060	2930					
						18x31.5	0.015	0.040	4180	
4,700		18x20	0.025	0.067	2860					
		16x31.5	0.016	0.050	3450	16x40	0.014	0.044	4080	
5,600		18x25	0.018	0.049	3150	18x35.5	0.013	0.040	4230	
		16x35.5	0.015	0.044	3620	18x40	0.011	0.032	4290	
6,800		18x31.5	0.015	0.040	4180					
		16x40	0.012	0.038	4080					
8,200		18x35.5	0.014	0.038	4230					
10,000		18x40	0.011	0.032	4290					

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STANDARD RATINGS

DxL(mm), R.C : (mA rms) at 105°C 100kHz , IMP:(Ω max) at 20°C,100kHz.

Cap (μF)	V	35				50				
		Item	D x L	IMP		R.C.	D x L	IMP		R.C
				20°C	-10°C			20°C	-10°C	
1						5x11	4.00	16.0	35	
2.2						5x11	2.50	10.0	50	
3.3						5x11	2.20	8.80	60	
4.7						5x11	1.90	7.60	100	
10						5x11	1.50	6.00	120	
22						5x11	0.700	2.80	180	
33		5x11	0.560	2.30	220					
47		6.3x11	0.350	1.40	280	6.3x11	0.300	1.20	300	
56		6.3x11	0.210	0.860	340	6.3x11	0.300	1.20	300	
100		8x11.5	0.150	0.560	510	8x11.5	0.160	0.670	560	
120						8x15	0.120	0.480	740	
150		8x11.5	0.130	0.520	650	10x12.5	0.120	0.480	770	
180		8x15	0.086	0.350	840	8x20	0.090	0.360	920	
220		8x15	0.086	0.350	850	10x16	0.083	0.340	1050	
		10x12.5	0.080	0.320	865					
270		8x20	0.069	0.260	1060	10x20	0.060	0.240	1230	
						12.5x16	0.062	0.200	1250	
330		10x16	0.060	0.240	1210	10x25	0.053	0.220	1450	
470		10x20	0.045	0.180	1410	10x30	0.043	0.170	1695	
						12.5x20	0.044	0.150	1670	
						16x16	0.054	0.170	1695	
560		10x25	0.041	0.160	1650	12.5x25	0.033	0.110	1950	
						18x16	0.053	0.150	1940	
680		10x30	0.030	0.120	1920	12.5x30	0.030	0.100	2320	
		12.5x20	0.033	0.132	1910					
		16x16	0.041	0.143	1950					
820		12.5x25	0.028	0.088	2100	12.5x35	0.023	0.081	2520	
						16x20	0.033	0.100	2220	
						12.5x40	0.020	0.069	2930	
1000		12.5x25	0.027	0.088	2230	16x25	0.025	0.075	2555	
						18x16	0.043	0.110	2220	
						18x20	0.036	0.097	2490	
1200		12.5x30	0.023	0.078	2660	16x31.5	0.021	0.066	3020	
		16x20	0.026	0.078	2530	18x25	0.025	0.070	2750	
1500		12.5x35	0.020	0.065	2880	16x35.5	0.018	0.056	3150	
1800		12.5x40	0.016	0.056	3350	16x40	0.016	0.048	3720	
		16x25	0.020	0.060	2940					
		18x20	0.025	0.066	2870	18x31.5	0.021	0.057	3640	
2200		16x31.5	0.016	0.050	3500	18x35.5	0.017	0.046	3690	
		18x25	0.019	0.049	3140					
2700		16x35.5	0.015	0.044	3620	18x40	0.014	0.038	3810	
		18x31.5	0.014	0.040	4180					
3300		16x40	0.013	0.038	4090					
		18x35.5	0.014	0.040	4230					
3900		18x40	0.012	0.033	4290					

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STANDARD RATINGS

DxL(mm), R.C : (mA rms) at 105°C 100kHz , IMP:(Ω max) at 20°C,100kHz.

Cap (μF)	V	63				80			
		D x L	IMP		R.C.	D x L	IMP		R.C.
			20°C	-10°C			20°C	-10°C	
15		5x11	0.880	3.50	165				
33		6.3x11	0.350	1.40	265				
47		8x11.5	0.220	0.880	500				
56			0.220	0.880	500				
68						10x12.5	0.170	0.660	480
82		8x15	0.160	0.640	665				
		10x12.5	0.110	0.440	690				
100		10x16	0.078	0.330	950	10x16	0.110	0.470	600
120		8x20	0.120	0.480	820	10x20	0.084	0.340	800
		10x16	0.076	0.310	950				
150						10x25	0.069	0.280	900
						12.5x16	0.110	0.340	750
180		10x20	0.056	0.230	1150				
		12.5x16	0.072	0.290	1150				
220		10x25	0.046	0.190	1350	12.5x20	0.062	0.180	1100
270		12.5x20	0.041	0.130	1500				
330		12.5x25	0.032	0.093	1900	12.5x25	0.047	0.140	1250
						16x20	0.048	0.150	1350
390		12.5x25	0.031	0.093	1900	12.5x30	0.042	0.130	1500
						12.5x35	0.036	0.110	1650
470		12.5x30	0.028	0.084	2300	16x25	0.038	0.120	1700
		16x20	0.032	0.096	2000	18x20	0.045	0.140	1500
560		12.5x35	0.024	0.072	2500	12.5x40	0.032	0.095	1800
		16x25	0.025	0.075	2600	16x31.5	0.032	0.095	1850
680		12.5x40	0.021	0.063	2800	18x25	0.036	0.110	1750
		18x20	0.030	0.090	2500				
820		16x31.5	0.021	0.063	2850	16x35.5	0.029	0.086	2000
		18x25	0.024	0.072	2800	18x31.5	0.030	0.090	1900
1000		16x35.5	0.019	0.057	2900	16x40	0.027	0.081	2200
		18x31.5	0.021	0.063	2900	18x35.5	0.027	0.081	2200
1200		16x40	0.018	0.054	3400	18x40	0.026	0.077	2700
		18x31.5	0.020	0.060	3300				
1500		18x35.5	0.018	0.054	3400				
1800		18x40	0.017	0.051	3500				

Cap (μF)	V	D x L	100		R.C
			IMP		
			20°C	-10°C	
6.8		5x11	1.40	5.60	125
15		6.3x11	0.570	2.30	205
27		8x11.5	0.360	1.40	355
39		8x15	0.250	1.00	450
47		10x12.5	0.170	0.660	480
56		8x20	0.190	0.760	565
68		10x16	0.110	0.470	600
82		10x20	0.084	0.340	800
100		12.5x16	0.110	0.340	750
120		10x25	0.069	0.280	900
150		12.5x20	0.062	0.180	1100
220		12.5x25	0.047	0.140	1250
		16x20	0.048	0.150	1350
270		12.5x30	0.042	0.130	1500
		12.5x35	0.036	0.110	1650
330		16x25	0.038	0.120	1700
		18x20	0.045	0.140	1500
390		12.5x40	0.032	0.095	1800
470		16x31.5	0.032	0.095	1850
		18x25	0.036	0.110	1750
560		16x35.5	0.029	0.086	2000
		18x31.5	0.030	0.090	1900
680		16x40	0.027	0.081	2200
		18x35.5	0.027	0.081	2200
820		18x40	0.026	0.077	2700

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